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ABSTRACT

This paper identifies areas within the teaching-learning process that need to be addressed by alternative teacher certification programs. One of the major strengths of alternative teacher certification programs rests in the subject matter knowledge of their participants. Beyond this, however, there is a growing knowledge base that includes contributions from research on specific teaching and learning skills and behaviors, research on child development and cognition, and recent research on teacher thinking and sense of efficacy. Effective teacher preparation programs incorporate this knowledge base with the assumed subject expertise of the candidate for alternative certification. As part of this discussion, a theory is presented that defines the role of "reflection" as a means to an end, rather than as an end in itself. The teacher developing classroom expertise uses reflection in the form of analysis and synthesis of subject matter, pedagogical knowledge, and classroom events in order to establish successful routines, which become part of the knowledge base. Potential weaknesses of alternative teacher education programs are time limitations and a possible lack of emphasis on pedagogical knowledge and the development of reflective processes. (JD)

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Alternative Certification and the Knowledge Base for Teachers

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ALTERNATIVE CERTIFICATION AND THE KNOWLEDGE BASE FOR TEACHERS

The Holmes Group's report on Tomorrow's Teachers (1986) and A Nation Prepared: Teachers for the 21st Century (Carnegie Forum on Education and the Economy, 1986) have renewed efforts to revise teacher education programs in America's colleges. As programs have developed to improve the knowledge base and professional nature of teacher education, another movement has gained popularity. New initiatives have been made in a number of states to provide alternative certification routes for individuals that desire to teach. Alternative certification has been defined as "any significant departure from the traditional undergraduate route through teacher education in universities and colleges (Hutton, 1987)." Alternative teacher certification programs traditionally offer a post-baccalaureate means to acquire certification in a relatively short period of time.

The alternative programs have been praised for offering a practical means to bring experts into the classroom and alleviate teacher shortages. They have also been criticized for being unprofessional short-sighted means to staff schools with unprepared teachers. Although the alternative certification programs have some unique benefits and drawbacks, they share many of the concerns associated with any program designed to prepare people to serve as classroom teachers. These concerns are associated with meeting the needs of individuals preparing to enter a profession that requires the knowledge and skills

necessary to successfully function in a very complex and demanding environment.

The purpose of this paper is to identify areas within the teaching-learning process which need to be addressed by alternative teacher certification programs and to provide a discussion of means to meet these needs. As part of this discussion a theory is presented that defines the role of "reflection" as a means to an end, rather than an end in itself. The paper will conclude with a discussion of how the unique qualities of alternative certification programs accentuate the strengths and weaknesses of teacher preparation efforts.

The Knowledge Base

One of the major strengths of alternative teacher certification programs rests in the subject matter knowledge of their participants. To date, all programs require their students to possess a baccalaureate degree and in most cases the degree major or minor must be in the subject matter area and/or pass a subject matter test (McKibbin, 1988). The program requirements virtually guarantee a sophisticated subject matter knowledge base. According to the educational reform reports it is this type of knowledge that beginning teachers are lacking. This is one of the motives behind the recommendation to eliminate undergraduate teacher education and to require a subject matter major prior to entering graduate teacher preparation.

However, principals and beginning teachers do not indicate that lack of subject matter knowledge is a major problem in classroom teaching (Post, Ward, & Willson, 1977; Tulloch, 1986). Instead, they identify classroom management and organizational problems as key concerns. In this area there is a growing knowledge base (see Reynolds, 1989). Research continues to produce results that can be applied to classroom teaching and learning. This knowledge base includes contributions from research on specific teaching and learning skills and behaviors, research on child development and cognition, and recent research on teacher thinking and sense of efficacy.

A variety of teaching behaviors and strategies have been identified and tested by educational researchers (see Brophy & Good, 1986). The result of this research is the establishment of generic teaching practices which are, in general, thought to be more effective in producing student achievement. Although the potential for misuse of this knowledge is great, it still is a valuable tool that beginning teachers should be familiar with upon entering the field.

In addition to knowledge concerning specific teaching behaviors, there are general procedural matters relating to curriculum. Taxonomies, task analysis procedures, scope and sequence, as well as basic lesson plan construction are all important parts of the teacher's knowledge base. Materials are another import of instruction. Although sometimes viewed as support or follow-up to teaching, for some students working with

materials is the real business of learning (Lee, Rowan, Allington, Anderson, Bossert, Harnischfeger, & Stallings, 1986).

An area often found lacking in teacher education has to do with knowledge of the student. A colleague commenting on this condition used the term "the invisible learner" to describe the lack of emphasis on development and cognition in students. The unit of analysis for classroom researchers and the unit of concern for beginning teachers often is the class as a whole. In an effort to prepare preservice teachers to deal with facing 20 to 30 students, the individual learner often gets lost. It is important that teachers are knowledgeable concerning child development and cognitive abilities. The teacher's expectations, planning, and teaching should match the abilities and knowledge of the students. With increased mainstreaming of exceptional students, the teacher needs to be knowledgeable of the extremes as well as the norms.

In addition to subject matter knowledge, the teacher should be knowledgeable about three processes operating in the learner as well as the knowledge base of the student (Marchant, 1989c). Affect involves feelings and beliefs that can influence learning. Teachers need to be aware of the relationship between motivation and achievement and know how to best facilitate both. Cognitive styles and specific strategies affect learning and can be adapted to be more conducive to learning. Behavioral and physiological factors also can interfere with learning and achievement. Teachers should be knowledgeable concerning the structure of

knowledge and the past experiences of students in order to mediate the acquisition of new knowledge and skills.

Beyond the Knowledge Base

In addition to recognition of learning processes at work in the learner, it is valuable to recognize that these same processes operate within the teacher (Marchant, 1989c). Affect influences teachers through expectations about students, feelings of self-efficacy, and feelings and beliefs concerning subject matter and teaching practices. As mentioned earlier, teaching behaviors have been studied in relationship to student achievement. The teacher's own behavior is an important process to be controlled and monitored by the teacher. There is an increasing recognition that teachers are decision makers, and an increasing value is being placed on reflective thinking and the cognitive process as it relates to teaching (Clark & Peterson, 1986).

Some Means to an End

It could be said that in some ways expert teachers are not particularly reflective. Berliner (1986) described expert teachers as being able to quickly and accurately recognize patterns of situations and match routines to those patterns. This matching of new situations to past experiences and past successful routines requires three conditions from the teacher.

The first condition involves possessing a knowledge base of situations and successful routines. The second condition requires the teacher to be able to recognize new situations that match appropriate past knowledge and experiences. The final condition requires that the teacher make the necessary adaptations to the old routines in order to make them appropriate for the new situation. It appears that much of this process is fairly automatic for expert teachers. It also appears that the basic process at work is one of application.

If the above analysis is correct, reflection is not the goal, but a means to an end. The teacher developing expertise uses reflection in the form of analysis and synthesis of subject matter, pedagogical knowledge, and classroom events in order to establish routines that are evaluated as successful. Once these routines are established, the expert teacher then looks for a match when confronted with a classroom situation.

This theory regarding the development of expertise in teachers holds some implications for teacher preparation programs, including alternative certification programs. If the goal of a teacher preparation program is to develop teachers that have the potential to become experts, then efforts should be made to develop the three required conditions described earlier.

The teacher should have a knowledge base of situations and successful routines. In order to facilitate the acquisition of this knowledge with a minimum amount of on-the-job trial-and-error learning, teacher preparation programs should provide a

wealth of information concerning teaching strategies and factors related to student learning. This information, in the form of theory and research, provides the "why" of choosing a teaching approach. This basic knowledge is conducive to the traditional college classroom format and paper and pencil assessment.

The teacher preparation program should provide opportunities to analyze prepared videotaped teaching vignettes and observations of teachers' classrooms. These experiences provide a matching of concepts and strategies to actual practice. Videotaped vignettes can provide prototypical examples of teaching and learning strategies. Classroom observations present matches and mismatches of teaching strategies and classroom situations.

Case studies, role-playing, and teaching laboratories provide means to practice and make adjustments to teaching strategies. As mentioned earlier, there are complex interactions taking place within each classroom student. When this is multiplied times the 20 to 30 students that occupy the classroom, situations become more difficult to "read" and this makes matching learned strategies to actual classroom situations more difficult. The before mentioned practices for training teachers allow for controlled adaptations before or in conjunction with a long-term field placement. (For more information concerning the development and evaluation of reflective teaching see Marchant, 1989b; Peterson & Comeaux, 1989).

It has been recognized that actual teaching experience and

student teaching field placements are the best means to learn effective teaching behaviors (Marchant, 1989a). However, a good foundation for experience can be developed before entering the classroom as "the" teacher.

The Strengths and Weaknesses of Alternative Programs

The strength of alternative teacher certification programs clearly rests in the subject matter knowledge base of the participants. This area, which the reform reports found lacking, is well established in most individuals entering alternative programs. In many instances these individuals are more mature and bring with them a wealth of experiences from which to draw. Most of the alternative teacher certification programs make use of extensive field placements. This on-the-job-training provides hands-on experience in dealing with classroom situations.

Although most alternative certification candidates possess a strong subject matter knowledge base, few have had prior training and experience in classroom settings. Therefore a potential weakness for the alternative programs involves their time limitations, and possible lack of emphasis on pedagogical knowledge and development of reflective processes. This leads to concerns regarding the "foundation" of the certification candidate when being thrust into the classroom (at times with limited supervision). When alternative certification candidates were compared to undergraduate student teachers and graduate

interns, they were rated the lowest of the groups by principals and teachers on communication skills, instructional skills, interpersonal skills, and ability to establish a positive learning environment (Soares, 1989).

Research suggests that the more educational training teachers receive, the longer they will remain in teaching. Banks and Necco (1987) found that alternatively certified special education teachers left teaching earlier than regularly prepared teachers. It takes time and reflection to develop expertise. Due to the compressed preparation time, alternative certification programs need to work especially hard to ensure a strong foundation of pedagogical knowledge and decision making skills. This foundation, along with a strong background in subject matter knowledge, will serve teachers well at the beginning and throughout their career.

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